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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Fri Oct 19 12:10:42 EDT 2007

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Application No: 09925284 Version No: 7.0

Input Set:

Output Set:

Started: 2007-10-03 14:47:01.332  
Finished: 2007-10-03 14:47:01.875  
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 543 ms  
Total Warnings: 6  
Total Errors: 0  
No. of SeqIDs Defined: 10  
Actual SeqID Count: 10

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W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)

# SEQUENCE LISTING

<110> Hawiger, Daniel  
 Steinman, Ralph M.  
 Nussenzweig, Michel C.

<120> Enhanced Antigen Delivery and Modulation  
 of the Immune Response Therefrom

<130> RUJ-001CNCPRCE2

<140> 09925284  
 <141> 2001-08-09

<150> 09/586,704  
 <151> 2000-06-05

<150> 08/381,528  
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<212> DNA

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<213> Homo sapiens

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Pro	Leu	Ser	Asp	Trp	Val	Val	Ala	Gln	Asp	Cys	Ser	Gly	Thr	Asn	Asn
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Met	Leu	Trp	Lys	Trp	Val	Ser	Gln	His	Arg	Leu	Phe	His	Leu	Glu	Ser
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Gln	Lys	Cys	Leu	Gly	Leu	Asp	Ile	Thr	Lys	Ala	Thr	Asp	Asn	Leu	Arg
			85						90					95	
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Asp	Gly	Asn	Ser	Tyr	Gly	Arg	Pro	Cys	Glu	Phe	Pro	Phe	Leu	Ile	Gly
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Glu	Thr	Trp	Tyr	His	Asp	Cys	Ile	His	Asp	Glu	Asp	His	Ser	Gly	Pro		
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Trp	Cys	Ala	Thr	Thr	Leu	Ser	Tyr	Glu	Tyr	Asp	Gln	Lys	Trp	Gly	Ile		
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Cys	Leu	Leu	Pro	Glu	Ser	Gly	Cys	Glu	Gly	Asn	Trp	Glu	Lys	Asn	Glu		
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Gln	Ile	Gly	Ser	Cys	Tyr	Gln	Phe	Asn	Asn	Gln	Glu	Ile	Leu	Ser	Trp		
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Lys	Glu	Ala	Tyr	Val	Ser	Cys	Gln	Asn	Gln	Gly	Ala	Asp	Leu	Leu	Ser		
				245					250					255			
Ile	His	Ser	Ala	Ala	Glu	Leu	Ala	Tyr	Ile	Thr	Gly	Lys	Glu	Asp	Ile		
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Ala	Arg	Leu	Val	Trp	Leu	Gly	Leu	Asn	Gln	Leu	Tyr	Ser	Ala	Arg	Gly		
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Trp	Glu	Trp	Ser	Asp	Phe	Arg	Pro	Leu	Lys	Phe	Leu	Asn	Trp	Asp	Pro		
	290					295					300						
Gly	Thr	Pro	Val	Ala	Pro	Val	Ile	Gly	Gly	Ser	Ser	Cys	Ala	Arg	Met		
305					310					315					320		
Asp	Thr	Glu	Ser	Gly	Leu	Trp	Gln	Ser	Val	Ser	Cys	Glu	Ser	Gln	Gln		
				325					330					335			
Pro	Tyr	Val	Cys	Lys	Lys	Pro	Leu	Asn	Asn	Thr	Leu	Glu	Leu	Pro	Asp		
			340					345					350				
Val	Trp	Thr	Tyr	Thr	Asp	Thr	His	Cys	His	Val	Gly	Trp	Leu	Pro	Asn		
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Asn	Gly	Phe	Cys	Tyr	Leu	Leu	Ala	Asn	Glu	Ser	Ser	Ser	Trp	Asp	Ala		
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Ala	His	Leu	Lys	Cys	Lys	Ala	Phe	Gly	Ala	Asp	Leu	Ile	Ser	Met	His		
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Ser	Leu	Ala	Asp	Val	Glu	Val	Val	Val	Thr	Lys	Leu	His	Asn	Gly	Asp		
				405					410					415			
Val	Lys	Lys	Glu	Ile	Trp	Thr	Gly	Leu	Lys	Asn	Thr	Asn	Ser	Pro	Ala		
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Leu	Phe	Gln	Trp	Ser	Asp	Gly	Thr	Glu	Val	Thr	Leu	Thr	Tyr	Trp	Asn		
	435					440						445					
Glu	Asn	Glu	Pro	Ser	Val	Pro	Phe	Asn	Lys	Thr	Pro	Asn	Cys	Val	Ser		
	450					455					460						
Tyr	Leu	Gly	Lys	Leu	Gly	Gln	Trp	Lys	Val	Gln	Ser	Cys	Glu	Lys	Lys		
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Leu	Arg	Tyr	Val	Cys	Lys	Lys	Lys	Gly	Glu	Ile	Thr	Lys	Asp	Ala	Glu		
				485					490					495			
Ser	Asp	Lys	Leu	Cys	Pro	Pro	Asp	Glu	Gly	Trp	Lys	Arg	His	Gly	Glu		
		500						505				510					
Thr	Cys	Tyr	Lys	Ile	Tyr	Glu	Lys	Glu	Ala	Pro	Phe	Gly	Thr	Asn	Cys		
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Asn	Leu	Thr	Ile	Thr	Ser	Arg	Phe	Glu	Gln	Glu	Phe	Leu	Asn	Tyr	Met		
	530					535					540						
Met	Lys	Asn	Tyr	Asp	Lys	Ser	Leu	Arg	Lys	Tyr	Phe	Trp	Thr	Gly	Leu		
545					550					555					560		
Arg	Asp	Pro	Asp	Ser	Arg	Gly	Glu	Tyr	Ser	Trp	Ala	Val	Ala	Gln	Gly		
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Val	Lys	Gln	Ala	Val	Thr	Phe	Ser	Asn	Trp	Asn	Phe	Leu	Glu	Pro	Ala		
			580					585					590				
Ser	Pro	Gly	Gly	Cys	Val	Ala	Met	Ser	Thr	Gly	Lys	Thr	Leu	Gly	Lys		
		595					600					605					
Trp	Glu	Val	Lys	Asn	Cys	Arg	Ser	Phe	Arg	Ala	Leu	Ser	Ile	Cys	Lys		
	610				615						620						
Lys	Val	Ser	Glu	Pro	Gln	Glu	Pro	Glu	Glu	Ala	Ala	Pro	Lys	Pro	Asp		

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Asp	Pro	Cys	Pro	Glu	Gly	Trp	His	Thr	Phe	Pro	Ser	Ser	Leu	Ser	Cys
				645					650						655
Tyr	Lys	Val	Phe	His	Ile	Glu	Arg	Ile	Val	Arg	Lys	Arg	Asn	Trp	Glu
				660					665					670	
Glu	Ala	Glu	Arg	Phe	Cys	Gln	Ala	Leu	Gly	Ala	His	Leu	Pro	Ser	Phe
				675				680					685		
Ser	Arg	Arg	Glu	Glu	Ile	Lys	Asp	Phe	Val	His	Leu	Leu	Lys	Asp	Gln
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Phe	Ser	Gly	Gln	Arg	Trp	Leu	Trp	Ile	Gly	Leu	Asn	Lys	Arg	Ser	Pro
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Asp	Leu	Gln	Gly	Ser	Trp	Gln	Trp	Ser	Asp	Arg	Thr	Pro	Val	Ser	Ala
						725				730					735
Val	Met	Met	Glu	Pro	Glu	Phe	Gln	Gln	Asp	Phe	Asp	Ile	Arg	Asp	Cys
				740					745					750	
Ala	Ala	Ile	Lys	Val	Leu	Asp	Val	Pro	Trp	Arg	Arg	Val	Trp	His	Leu
				755					760					765	
Tyr	Glu	Asp	Lys	Asp	Tyr	Ala	Tyr	Trp	Lys	Pro	Phe	Ala	Cys	Asp	Ala
				770				775					780		
Lys	Leu	Glu	Trp	Val	Cys	Gln	Ile	Pro	Lys	Gly	Ser	Thr	Pro	Gln	Met
785						790				795					800
Pro	Asp	Trp	Tyr	Asn	Pro	Glu	Arg	Thr	Gly	Ile	His	Gly	Pro	Pro	Val
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Ile	Ile	Glu	Gly	Ser	Glu	Tyr	Trp	Phe	Val	Ala	Asp	Pro	His	Leu	Asn
				820					825					830	
Tyr	Glu	Glu	Ala	Val	Leu	Tyr	Cys	Ala	Ser	Asn	His	Ser	Phe	Leu	Ala
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Thr	Ile	Thr	Ser	Phe	Thr	Gly	Leu	Lys	Ala	Ile	Lys	Asn	Lys	Leu	Ala
				850				855				860			
Asn	Ile	Ser	Gly	Glu	Glu	Gln	Lys	Trp	Trp	Val	Lys	Thr	Ser	Glu	Asn
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Pro	Ile	Asp	Arg	Tyr	Phe	Leu	Gly	Ser	Arg	Arg	Arg	Leu	Trp	His	His
				885					890					895	
Phe	Pro	Met	Thr	Phe	Gly	Asp	Glu	Cys	Leu	His	Met	Ser	Ala	Lys	Thr
				900					905					910	
Trp	Leu	Val	Asp	Leu	Ser	Lys	Arg	Ala	Asp	Cys	Asn	Ala	Lys	Leu	Pro
				915					920					925	
Phe	Ile	Cys	Glu	Arg	Tyr	Asn	Val	Ser	Ser	Leu	Glu	Lys	Tyr	Ser	Pro
				930								940			
Asp	Pro	Ala	Ala	Lys	Val	Gln	Cys	Thr	Glu	Lys	Trp	Ile	Pro	Phe	Gln
945						950				955					960
Asn	Lys	Cys	Phe	Leu	Lys	Val	Asn	Ser	Gly	Pro	Val	Thr	Phe	Ser	Gln
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Ala	Ser	Gly	Ile	Cys	His	Ser	Tyr	Gly	Gly	Thr	Leu	Pro	Ser	Val	Leu
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Ser	Arg	Gly	Glu	Gln	Asp	Phe	Ile	Ile	Ser	Leu	Leu	Pro	Glu	Met	Glu
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Ala	Ser	Leu	Trp	Ile	Gly	Leu	Arg	Trp	Thr	Ala	Tyr	Glu	Arg	Ile	Asn
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Ser	His	Phe	His	Cys	Ala	Leu	Ile	Leu	Asn	Leu	Lys	Lys	Ser	Pro	Leu
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Thr	Gly	Thr	Trp	Asn	Phe	Thr	Ser	Cys	Ser	Glu	Arg	His	Ser	Leu	Ser
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Leu Cys Gln Lys Tyr Ser Glu Thr Glu Asp Gly Gln Pro Trp Glu Asn  
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 1105 1110 1115 1120  
 Lys Pro Leu Thr Trp His Gly Ala Leu Lys Glu Cys Met Lys Glu Lys  
 1125 1130 1135  
 Met Arg Leu Val Ser Ile Thr Asp Pro Tyr Gln Gln Ala Phe Leu Ala  
 1140 1145 1150  
 Val Gln Ala Thr Leu Arg Asn Ser Ser Phe Trp Ile Gly Leu Ser Ser  
 1155 1160 1165  
 Gln Asp Asp Glu Leu Asn Phe Gly Trp Ser Asp Gly Lys Arg Leu Gln  
 1170 1175 1180  
 Phe Ser Asn Trp Ala Gly Ser Asn Glu Gln Leu Asp Asp Cys Val Ile  
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 Leu Asp Thr Asp Gly Phe Trp Lys Thr Ala Asp Cys Asp Asp Asn Gln  
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 Pro Gly Ala Ile Cys Tyr Tyr Pro Gly Asn Glu Thr Glu Glu Glu Val  
 1220 1225 1230  
 Arg Ala Leu Asp Thr Ala Lys Cys Pro Ser Pro Val Gln Ser Thr Pro  
 1235 1240 1245  
 Trp Ile Pro Phe Gln Asn Ser Cys Tyr Asn Phe Met Ile Thr Asn Asn  
 1250 1255 1260  
 Arg His Lys Thr Val Thr Pro Glu Glu Val Gln Ser Thr Cys Glu Lys  
 1265 1270 1275 1280  
 Leu His Pro Lys Ala His Ser Leu Ser Ile Arg Asn Glu Glu Glu Asn  
 1285 1290 1295  
 Thr Phe Val Val Glu Gln Leu Leu Tyr Phe Asn Tyr Ile Ala Ser Trp  
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 Val Met Leu Gly Ile Thr Tyr Glu Asn Asn Ser Leu Met Trp Phe Asp  
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 Lys Thr Ala Leu Ser Tyr Thr His Trp Arg Thr Gly Arg Pro Thr Val  
 1330 1335 1340  
 Lys Asn Gly Lys Phe Leu Ala Gly Leu Ser Thr Asp Gly Phe Trp Asp  
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 Ile Gln Ser Phe Asn Val Ile Glu Glu Thr Leu His Phe Tyr Gln His  
 1365 1370 1375  
 Ser Ile Ser Ala Cys Lys Ile Glu Met Val Asp Tyr Glu Asp Lys His  
 1380 1385 1390  
 Asn Gly Thr Leu Pro Gln Phe Ile Pro Tyr Lys Asp Gly Val Tyr Ser  
 1395 1400 1405  
 Val Ile Gln Lys Lys Val Thr Trp Tyr Glu Ala Leu Asn Ala Cys Ser  
 1410 1415 1420  
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 1425 1430 1435 1440  
 Phe Leu Glu Asp Ile Val Asn Arg Asp Gly Phe Pro Leu Trp Val Gly  
 1445 1450 1455  
 Leu Ser Ser His Asp Gly Ser Glu Ser Ser Phe Glu Trp Ser Asp Gly  
 1460 1465 1470  
 Arg Ala Phe Asp Tyr Val Pro Trp Gln Ser Leu Gln Ser Pro Gly Asp  
 1475 1480 1485  
 Cys Val Val Leu Tyr Pro Lys Gly Ile Trp Arg Arg Glu Lys Cys Leu  
 1490 1495 1500  
 Ser Val Lys Asp Gly Ala Ile Cys Tyr Lys Pro Thr Lys Asp Lys Lys  
 1505 1510 1515 1520  
 Leu Ile Phe His Val Lys Ser Ser Lys Cys Pro Val Ala Lys Arg Asp  
 1525 1530 1535  
 Gly Pro Gln Trp Val Gln Tyr Gly Gly His Cys Tyr Ala Ser Asp Gln



1540	1545	1550
Val Leu His Ser Phe Ser Glu Ala Lys Gln Val Cys Gln Glu Leu Asp		
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His Ser Ala Thr Val Val Thr Ile Ala Asp Glu Asn Glu Asn Lys Phe		
1570	1575	1580
Val Ser Arg Leu Met Arg Glu Asn Tyr Asn Ile Thr Met Arg Val Trp		
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Leu Gly Leu Ser Gln His Ser Leu Asp Gln Ser Trp Ser Trp Leu Asp		1600
1605	1610	1615
Gly Leu Asp Val Thr Phe Val Lys Trp Glu Asn Lys Thr Lys Asp Gly		
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Asp Gly Lys Cys Ser Ile Leu Ile Ala Ser Asn Glu Thr Trp Arg Lys		
1635	1640	1645
Val His Cys Ser Arg Gly Tyr Ala Arg Ala Val Cys Lys Ile Pro Leu		
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Ser Pro Asp Tyr Thr Gly Ile Ala Ile Leu Phe Ala Val Leu Cys Leu		
1665	1670	1675
Leu Gly Leu Ile Ser Leu Ala Ile Trp Phe Leu Leu Gln Arg Ser His		
1685	1690	1695
Ile Arg Trp Thr Gly Phe Ser Ser Val Arg Tyr Glu His Gly Thr Asn		
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Glu Asp Glu Val Met Leu Pro Ser Phe His Asp		
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